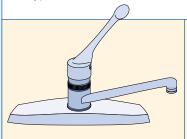
## **Washerless Faucets**

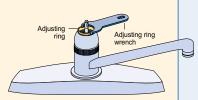
These can be a single lever or two-handle type. Washerless faucets usually last longer than compression faucets, but can also develop leaks. When a washerless faucet needs repair you will need to replace some or all of the mixture and flow parts. This depends on the type of faucet — disc, ball or cartridge.



### **Ball Faucets**

Follow general precautions provided at the beginning of this section. Tools are described on *Tools* page.

Ball faucets have free-moving handles attached to a rotating, slotted, hollow metal or plastic ball inside the faucet body. This ball rotates into positions that align the water flow with the hot and cold water inlets in the body of the faucet. A hex setscrew secures the handle to the faucet base. When replacing worn parts, purchase a rebuild kit for your model of faucet. It will contain all the replacement parts and a special tool for removing the handle.



Tightening the adjusting ring

Ball faucet assembly

Handle

Setscrew

Adjusting ring

Cap

Cam

Cam washer

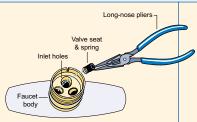
Ball

Spring

Spout O-ring

Spout O-ring

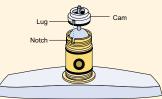
If the handle leaks, you must tighten the adjusting ring or replace the cam washer that sits above the ball using an adjusting ring wrench or a kitchen knife. If this does not solve the problem, you will have to disassemble the faucet further. If the leak occurs through the faucet spout it is because of worn valve seats or springs. Use long-nose pliers or a pencil to lift out the old valve seats and springs and replace them with new ones.



Removing old seats and springs

If the ball is corroded, replace it. Make sure you reinstall the ball in the same position as it was removed. If the leak occurs at the base of the faucet, replace the O-rings on the faucet body.

When reassembling, be sure to fit the lug on the cam into the notch in the faucet body.



Align the cam lug with notch on faucet body

Check for leaks and use tools to further tighten any parts if necessary until no leaks are visible.

### **Disc Faucets**



Follow general precautions provided at the beginning of this section. Tools are described on *Tools* page.

The core mechanism of a disc fau-

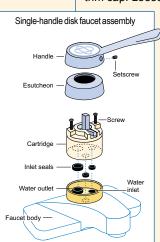
cet is a ceramic disc assembly. Disc faucets can be single or double handle type. The disc assembly will seldom wear out on a single-handle faucet, but leaks can develop when any of the rubber seals begin to age or corrosion accumulates. There are three seals

that control the flow of hot, cold and mixed water on a singlehandle faucet.

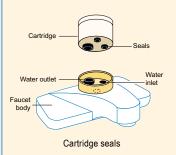
# REPAIRING SINGLE HANDLE DISC FAUCETS

To repair single-handle type, push the spout to the side and lift up the handle. Remove the setscrew with an allen wrench. Lift off the handle and remove the decorative trim cap. Loosen the two screws

that hold the disc assembly to the faucet body or other retaining device such as a nut. Under the disc you will see three neoprene inlet seals. Remove all of them, clean the assembly and the water inlet/outlet holes, and install new seals.



Be sure to align the inlet holes of the disc assembly with those in the base of the faucet.

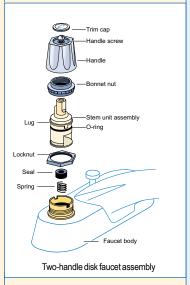


If the faucet continues to leak, replace the cartridge that contains the ceramic discs by purchasing a replacement kit and following the instructions in the kit.

Older models may be held together from under the countertop. If it is difficult to find how to get the handle off, look for two screws under the counter. Loosen these and the cover and handle will come off

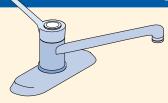
#### **TWO-HANDLE DISC FAUCETS**

Two-handle disc faucets differ in that most have just a single rubber or plastic seal and a small spring on each side.



If this faucet leaks at the handle, the stem unit assembly or O-ring needs replacing. If it is dripping from the spout, remove the seal and spring with long-nose pliers and replace with identical parts.

## **Cartridge Faucets**



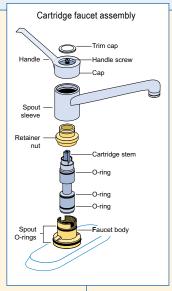
Follow general precautions provided at the beginning of this section. Tools are described on the *Tools* page.

Cartridge faucets are identified by the narrow metal or plastic cartridge that sits inside the faucet body. Most are single-handle faucets but some are double-handled. Leaks usually occur with this type of faucet because the O-rings or the cartridge assembly that controls the mixture and flow of water becomes worn.

When you replace either of these parts, be sure get an exact duplicate. These are often available in brass, plastic or stainless steel, the latter being the most expensive and the most preferred.

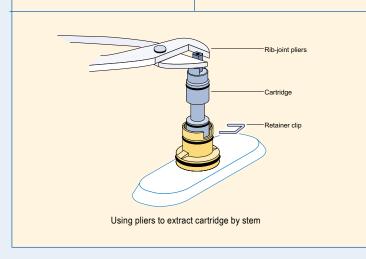
To change an O-ring, remove the trim cap. Unscrew the handle screw to take off

the cap. The spout sleeve can now be removed. Unscrew the retainer nut with rib-joint pliers and then remove the cartridge by using a screwdriver or long-nose pliers to first remove the retainer clip from its slot. You will find this clip just under the rim of the faucet body. Carefully study the placement of cartridge's retainer clip for successful reassembly.



Then extract the clip by prying it out with a screwdriver tip. Grip the cartridge stem with pliers and extract by twisting and lifting. Note that hot and cold water are easily reversed: so pay special attention to which way the stem's flat sides face. It may be located by a tab and notch. Remove the spout

by twisting and lifting up. Replace the O-rings on the cartridge if they show wear. Apply heat proof grease to the new O-rings before installation. Make sure to insert the retainer clip properly and complete reassembly. A special cartridge removal tool is available and may be necessary.



# **Tub and Shower Faucets**

Tub and shower faucets are essentially the same as sink faucets, only they are larger and are positioned horizontally. They can be either the compression or washerless type. Many times, most of the faucet is located behind the wall and you will need a plumbing socket wrench to unscrew the large "bonnet" nut in order to remove the stem. Usually tubs and showers do not have handy shut-off valves, so you will need to turn the water off at the main house valve.

so you will need to turn the water off at the main house valve.
For more detailed information, consult one of the recommended plumbing books listed on the <i>Repairing Leaks</i> page.